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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SUITER SWANTZ PC LLO
14301 FNB PARKWAY
SUITE 220
OMAHA, NE 68154

EXAMINER
CHANNAVAJJALA, SRIRAMA T

ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
09/14/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

file@SUITER.COM
srs@suiter.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2011*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-17,19-27,29-38,40-42 and 44-56* is/are pending in the application.

     5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-17,19-27,29-38,40-42 and 44-56* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *14 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Response to RCE-2

1.   Claims *1-17,19-27,29-38,40-42,44-56* are pending in this application.

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114 filed on 3/23/2009. Applicant's submission filed on 7/25/2011 has been entered

3.   Examiner acknowledges applicants' amended claims 1,6,7,9, 11 filed on 3/22/2011.

4.   *"Decision on __Appeal__" mailed on 3/23/2010.*

5.   *Decision on request for __rehearing__ mailed on 8/11/2010*

6.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114 filed on 3/23/2009. Applicant's submission filed on 9/29/2010 has been entered

7.   Examiner acknowledges applicant **amended claims 1,6,9,11 and added new claims 53-56** filed on 9/29/2010.

Drawings

8.   The Drawings filed on 2/14/2001 are <u>acceptable</u> for examination purpose

Priority

9.   Acknowledgment is made of applicant's claim for domestic priority application #

<u>60182176</u>, **filed 02/14/2000** under 35 U.S.C. 119(e).

Information Disclosure Statement

10.   The information disclosure statement filed on

<u>11/2/2010,6/21/2010;3/12/2010;11/19/2009;6/25/2009;6/15/2009;1/16/2009</u> is in

compliance with the provisions of 37 CFR 1.97, and has been considered and a copy

was enclosed with previous Office Action

11.   The information disclosure statement filed on 5/9/2008 is in compliance with the

provisions of 37 CFR 1.97, and has been considered and a copy was enclosed with

previous Office Action.

12.   Applicant is reminded that an applicant's duty of disclosure of material and

information is not satisfied by presenting a patent examiner with 'a <u>mountain of large</u>

<u>information disclosure</u> (material) from which he/she is presumed to have been able, with

his/her expertise. Applicant is reminded that an applicant's duty of disclosure of

material and with adequate time, to have found the critical (material). It ignores the real

world conditions under which examiners work. Rohm & Haas Co. v. Crystal Chemical

Co.,722 F.2d 1556 (220 USPQ 289) (Fed. Cir. 1983), cert deniedb 469 U.S. 851 (1984).

(Emphasis in original). ***Patent applicant has a duty not just to disclose pertinent prior art references but to make a disclosure in such way as not to 'bury" it within other disclosures of less relevant prior art***; See Golden Valley Microwave Foods Inc. V Weaver Popcorn Co. Inc, 24 USPQZd 1801 (N.D. Ind. 1992)., Molins PLC v. Textron Inc., 26 USPQZd 1889, at 1889 (D.Del. 1992)*, Penn Yan Boats, Inc. F. Sea Lark 8oals, Inc et al. 175 USPQ 260, at 272 (S.D.Fl. 1972).

Eliminate clearly irrelevant and marginally pertinent cumulative information. If a long list is submitted, highlight those documents which have been specifically brought to applicant's attention and/or are known to be of most significance. See Penn Yan Boats, Inc. v. Sea Lark Boats, Inc., 359 F. Supp. 948, 175 USPQ 260 (S.D. Fla. 1972), aff 'd, 479 F.2d 1338, 178 USPQ 577 (5th Cir. 1973), cert. denied, 414 U.S. 874 (1974). But cf. Molins PLC v. Textron Inc., 48 F.3d 1172, 33 USPQZd 1823 (Fed. Cir. 1995).

Please note that it is the applicant's duty to particularly point out any ___**highly relevance**___ material amongst the references cited in the IDS filed on 9/8/2008. The examiner under the condition noted above performed a cursory review of the submitted references.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13.   *Claims 1-56 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.*

14.   Claims 1,11 as amended 3/22/2011, merely adding language "set of instructions

executed by a computing device"……. Providing, to the computing device, … providing

, to the computing device,……..associating, via the computing device, ….assigning, via

the computing device,……receiving, via direct interactive dialogue….selecting, via the

computing device,…..outputting, via the computing device,….[claim 1 as amended

3/22/2011]…… outputting, via the computing device…… wherein each object

comprises an *"encapsulated"* combination of data …..Manipulate the data" [claim 1];

In claim 11, [as amended 3/22/2011], method of diagnosing…..implemented as a

set of instructions executed by a computing device…..receiving, via direct interactive

dialogue…..assigning, via the computing device,……selecting, via the computing

device,…..invoking, via the computing device, a preferred symptom object…..outputting,

via the computing device, ……invoking or selecting,

do not have support from the originally filed specification [page 2 through 85

including drawing fig 1-35], particularly " a set of instructions executed by a computing

device [as amended 3/22/2011], further instant claims 1,11 are considered to be mere

software routines and/or software code in view of the specification [page 3, 4-7, line

12-16, page 10, 21-30, page 14,-20, page 31-34, page 85 line 12-26, page 87],

specifically examiner notes evidence from the instant application specification as

follows:

a)   *spec page 13-14 directed to "disease object" – defines as software object*

b)   *spec page 15-16 directed to "symptom object" – defines as software object*

c)   *spec page 18-19 directed to "valuator object" – defines as software object*

d)   spec page 19-20 directed to "question object" – defines as software object

e)   spec page 20-21 directed to "node object"- defines as software object

f)   spec page 29-30 directed to "alternative symptom" –defines as software object

also, **Encapsulation** is the process of combining data and functions into a single unit

called class , and is only accessible through the functions present inside the class, data

encapsulation is part of hiding data, and therefore, claims 1 as amended considered as

software per sa, further, claim 11 also as amended considered as software per sa

    Claims 2-5, 12-19, 43-48, 52-53, and 56 are likewise rejected

NOTE: In the page 8, line 1-2, claim 11[as amended 3/22/2011], examiner noted that

the limitation "wherein each object……..encapsulated combination…..[deleted]

15.   In the claims 6 and 9 [as amended 7/25/2011] merely added language

"a computing device" ; "computer code, configured to execute on the computing

device,…..do not have support from the originally filed specification within the meaning

of 35 U.S.C. 101. As such, they fail to fall within a statutory category because it appears

to be mere routines and/or steps software per sa. i.e., claims 6,9 as amended merely

directed to "objects" invoking another "object" is considered to be mere software

routines and/or software code in view of the specification [page 3, 4-7, line 12-16, page

10, 21-30, page 14,-20, page 31-34, page 85 line 12-26, page 87], for example:

a)   spec page 13-14 directed to "disease object" – defines as software object

b)   spec page 15-16 directed to "symptom object" – defines as software object

c)   spec page 18-19 directed to "valuator object" – defines as software object

d)   *spec page 19-20 directed to "question object" – defines as software object*

e)   *spec page 20-21 directed to "node object"- defines as software object*

f)   *spec page 29-30 directed to "alternative symptom" –defines as software object*

therefore, claims 1,6,9, 11 as amended [7/25/2011, 3/22/2011] considered as software

per sa. They are, at best, functional descriptive material per se. Claims 7-8, 10, 20- 42,

49-51 and 54-55 are likewise rejected.

A claimed process is eligible for patent protection under 35 U.S.C. § 101 if:

"(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. See Benson, 409 U.S. at 70 ('Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines.'); Diehr, 450 U.S. at 192 (holding that use of mathematical formula in process 'transforming or reducing an article to a different state or thing' constitutes patent-eligible subject matter); see also Flook, 437 U.S. at 589 n.9 ('An argument can be made [that the Supreme] Court has only recognized a process as within the statutory definition when it either was tied to a particular apparatus or operated to change materials to a 'different state or thing' '); Cochrane v. Deener, 94 U.S. 780, 788 (1876) ('A process is...an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.').7 A claimed process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. And a claimed process that transforms a particular article to a specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a manner not covered by the claim, or to do anything other than transform the specified article." (In re Bilski, 88 USPQ2d 1385, 1391 (Fed. Cir. 2008))

Also noted in Bilski is the statement, "Process claim that recites fundamental

principle, and that otherwise fails 'machine-or-transformation' test for whether such

claim is drawn to patentable subject matter under 35 U.S.C. §101, is not rendered

patent eligible by mere field-of-use limitations; another corollary to machine-or-

transformation test is that recitation of specific machine or particular transformation of

specific article does not transform unpatentable principle into patentable process if

recited machine or transformation constitutes mere 'insignificant post- solution activity.'"

(In re Bilski, 88 USPQ2d 1385, 1385 (Fed. Cir. 2008)) Examples of insignificant post-

solution activity include data gathering and outputting. Furthermore, the machine or

transformation must impose meaningful limits on the scope of the method claims in

order to pass the machine-or-transformation test. Please refer to the USPTO's

"Guidance for Examining Process Claims in view of In re Bilsk memorandum dated

January 7, 2009,

<http://www.uspto..gov/web/offices/pac/dapp/opla/documents/bilski_guidance_memo.

pdf>>

NOTE: Examiner also cites and incorporates "**Board of Patent Appeals and**

Interferences" *decision* page 8-10 mailed on 3/23/2010.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16.   Claims 6-9,20-27,29-38,40-42,49-51,54-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iliff (U.S. Patent No. 5,868,669) in view of Braun et al (hereafter Braun) (U.S. Patent No. 6050940), based on provisional application No # 60/019,962 filed on Jun 17,1996.

17.   With respect to claim 6, Iliff teaches an object based automated diagnostic

system comprising, a computing device and computer code, configured to execute on

the computing device, the computer code comprising [col 4, line 37-47], Iliff supports

computer having input and output, algorithm processor executing the instruction in the

computer; computing device corresponds to Iliff's computer comprising a plurality of

diagnostic objects which interact as executed by the computing device [col 4, line 37-47]

to receive input from a user and , as a result of said interaction [col 4, line 62-67, col 5,

line 36-45], Iliff specifically supports both input and output device;

determine a diagnosis of a patient, (MDATA system supports object oriented

language such as C++ related to patient's medical records and/objects, further

Encapsulation is the process of combining data and functions into a single unit called

class is integral part of C++ programming because Iliff specifically teaches MDATA

system including defining various software modules as detailed in col 8, line 49-67)

wherein the objects include at least two diagnostic objects comprising:

a disease object processing data indicative of an abnormal health state or

disease (col 20, line 1-5, col 36, line 50-63), abnormal health state or disease

corresponds to Iliff's disease object[s];

a symptom object, processing data indicative of a patient sign, complaint, finding,

or test results (col 39, line 35-60), Iliff specifically teaches MDATA system processing

information related to patient's diagnostic or symptom screening for example as detailed

in col 39, line 35-60;

a valuator object, processing data indicative of a value of the symptom of the

patient, a question object, processing data indicative of questions to ask the patient

specific to a specific symptom of the patient (col 30, line 35-60, col 40, line 7-12), Iliff

specifically teaches MDATA system specifically processing specific questions related to

specific headaches for example "migraine screening",

a node object, processing data indicative of a single well-defined question to the

patient and a candidate object processing data indicative of candidate disease for

diagnosis of the patient (i.e., diagnosises and symptoms, each diagnosis associated

with symptoms in MDATA system, lines 24-35 in col. 12, lines 38- 45 in col. 21, and line

24 in col. 35 thru line 49 in col. 42, the MDATA system is written in object-oriented

program language, such as C++, lines 7-16 in col. 14, therefore teaching object),

wherein the objects are arranged in a hierarchical relationship such that the

result of one of the objects is input to another of the objects (i.e., a directed graph of a

node map, line 64 in col. 14.thru line 24 in col. 15, and process of initial screening

questions to migraine screening questions and to migraine confirmation questions, lines

25-44 in col. 35, lines 61-67 in col. 39, and lines 18-25 in col. 40),

Iliff teaches at least one of the diagnostic objects directly invokes another of the

diagnostic objects in a computer-based medical diagnostic system so as to output a

diagnosis of a patient based on the prior object invocation (i.e., a directed graph of a

node map in which anode directly invokes another node, line 64 in col. 14 thru line 24 in

col. 15; migraine object directly invokes migraine symptom/questions objects, lines 61-

67 in col. 39).

Iliff discloses the claimed subject matter as discussed above except

encapsulation of data, although it is noted that **_encapsulation_** is the process of

combining data and functions into a single unit called class is integral part of C++

programming because Iliff specifically teaches MDATA system including defining

various software modules as detailed in col 8, line 49-67. On the other hand, Braun et

al. teaches "wherein each object has corresponding data and processes, and wherein

the data is encapsulated so that other objects only see the processes of a particular

object that can be invoked to access the data" (Abstract, col 3, line 15-19, col 4, line 32-

45, col 11, line 14-31), Braun directed to medical diagnosis system specifically real-time

data collection, automated data analysis, data encoding, viewing and like i.e. supporting

multiple functionalities, further allows data collection, encapsulation as detailed in col 11, line 14-31.

Therefore, based on LIiff in view of Braun, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of medical diagnosis data collection, analysis into the system of Iliff's medical diagnostic and treatment system in order to maintain the integrity of the overall data collection, encoding, and analysis (Braun: Abstract), further allows supporting "distributed collection including remote monitoring application (col 12, line 35-38), furthermore allows users of Iliff to added programmed functionality which initiates new data collection or output, monitors data streams as new data arrives, produces new views of the data and like (Braun: col 11, line 53-57)

18.   With respect to claim 7, Iliff teaches the objects include a plurality of disease objects and a plurality of symptom objects (i.e., diagnosises and symptoms, each diagnosis associated with symptoms in MDATA system, lines 24-35 in col. 12, lines 38-45 in col. 21, and line 24 in col. 35 thru line 49• in col. 42, the MDATA system is written in object-oriented program language, such as C++, lines 7-16 in col. 14, therefore teaching object).

19.   With respect to claim 8, Iliff teaches an engine object to coordinate the other objects (i.e., a node map, lines 1-7 in col. 15 and evaluation process 254 in fig. 6).

20.   With respect to claim 9, Iliff teaches an object based automated diagnostic

system comprising: a computing device; and computer code, configured to execute on

the computing device, the computer code comprising: (col 4, line 37-47), Iliff supports

computer having input and output, algorithm processor executing the instruction in the

computer; computing device corresponds to Iliff's computer comprising:

a plurality of diagnostic objects which interact to receive input from a user and, as

a result of said interaction [col 4, line 62-67, col 5, line 36-45], Iliff specifically supports

both input and output device;

determine a diagnosis of a patient (col 13, line 6-10, MDATA system supports

classification of "dieses" particularly creating and classifying dieses to advise the

patients, further MDATA system supports object oriented language such as C++ related

to patient's medical records and/objects, because Iliff specifically teaches MDATA

system including defining various software modules as detailed in col 8, line 49-67)

wherein the diagnostic objects include at least a plurality of disease objects, each

disease object processing data indicative of an abnormal health state or disease" (col

20, line 1-5, col 36, line 50-63), abnormal health state or disease corresponds to Iliff's

disease object[s];

a plurality of symptom objects, each symptom object processing data indicative

of a patient sign, complaint, finding, or test result" (col 39, line 35-60), Iliff specifically

teaches MDATA system processing information related to patient's diagnostic or

symptom screening for example as detailed in col 39, line 35-60; and

a plurality of valuator objects, each valuator object processing data indicative of a

value of a symptom of the patient" (col 30, line 35-60, col 40, line 7-12), Iliff specifically

teaches MDATA system specifically processing specific questions related to specific

headaches for example "migraine screening"; and

wherein at least some of the diagnostic objects perform their own tasks and

directly call upon other diagnostic objects to perform their tasks at the appropriate time

in a computer-based medical diagnostic system so as to output a diagnosis of a patient

(i.e., diagnosis, symptoms, and evaluation processes, each diagnosis associated with

symptoms in MDATA system, lines 24-35 in col. 12, lines 38-45 in col. 21,.lines 36-41 in

col. 39, line 24 in col. 35 thru line 49 in col. 42, and lines 24-37 in col. 18; the MDATA

system is written in object-oriented program language, such as C++, lines 7-16 in

col. 14, therefore teaching object; a directed graph of a node map in which a node

directly invokes another node, line 64 in col. 14 thru line 24 in col. 15).

Iliff discloses the claimed subject matter as discussed above except

encapsulation of data, although it is noted that **_encapsulation_** is the process of

combining data and functions into a single unit called class is integral part of C++

programming because Iliff specifically teaches MDATA system including defining

various software modules as detailed in col 8, line 49-67. On the other hand, Braun et

al. teaches "wherein each object has corresponding data and processes, and wherein

the data is encapsulated so that other objects only see the processes of a particular

object that can be invoked to access the data" (Abstract, col 3, line 15-19, col 4, line 32-

45, col 11, line 14-31), Braun directed to medical diagnosis system specifically real-time

data collection, automated data analysis, data encoding, viewing and like i.e. supporting

multiple functionalities, further allows data collection, encapsulation as detailed in col

11, line 14-31.

Therefore, based on Lliff in view of Braun, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to utilize the teaching

of medical diagnosis data collection, analysis into the system of Iliff's medical diagnostic

and treatment system in order to maintain the integrity of the overall data collection,

encoding, and analysis (Braun: Abstract), further allows supporting "distributed

collection including remote monitoring application (col 12, line 35-38), furthermore

allows users of Iliff to added programmed functionality which initiates new data

collection or output, monitors data streams as new data arrives, produces new views of

the data and like (Braun: col 11, line 53-57)

21.   With respect to claim 20, Iliff teaches the objects include a disease object (i.e.,

migraine object, lines 53-60 in col. 39), a symptom object (i.e., headache, lines 53-60 in

col. 39), a valuator object (i.e., evaluation process 254, lines 36-41 in col. 39), a

question object (i.e., questions, lines 41-52 in col. 39), .a node object (i.e., interface to a

client 124 in fig. 4), and a candidate object (i.e., ranked lists, lines 12-35 in col. 39).

22.   With respect to claim 21, Iliff teaches. the symptom object invokes the valuator

object (i.e., the results of symptoms are evaluated, lines 53-60 in col. 39).

23.   With respect to claim 22, Iliff teaches the valuator object invokes the question

object (i.e., another screen .questions are invoked after the evaluation, line 53 in col. 39

thru line 12 in col. 40).

24.   With respect to claim 23, Iliff teaches the question object invokes the node object

(i.e., another screen questions are asked to the user, line 53 in col. 39 thru line 12 in

col. 40).

25.   With respect to claim 24, Iliff teaches a particular disease is associated with a

plurality of disease objects corresponding to different phases of the particular disease

(i.e., stages of illness, lines 31-42 in col. 1).

26.   With respect to claim 25, Iliff teaches a particular disease is associated with a

plurality of disease objects corresponding to different populations for the particular

disease (lines 22-28 in col. 47).

27.   With respect to claim 26, Iliff teaches a particular disease object is representative

of a plurality of related diseases that share common symptoms (i.e., meningitis and

brain tumor shares headache, lines 11-26 in col. 41).

28.   With respect to claim 27, Iliff teaches the objects act independently of other

objects and a particular object retains a record of its actions for future reference (lines

37-47 in col. 13 and lines 24-44 in col. 18).

29.   With respect to claim 29, Iliff teaches a particular disease object monitors the

questions and answers of other disease objects (lines 11-26 in col. 41 and lines 43-46

in col. 40).

30.   With respect to claim 30, Iliff teaches the engine object coordinates a plurality of

concurrently operating disease objects by switching execution among the disease

objects (i.e., excluding diseases from diagnostic consideration, lines 11-26 in col. 41

and lines 43-46 in col. 40).

31.   The limitations of claim 31 are rejected in the analysis of claim 21 above, and the

claim is rejected on that basis.

32.   The limitations of claim 32 are rejected in the analysis of claim 20 above, and the

claim is rejected on that basis.

33.   The limitations of claim 33 are rejected in the analysis of claim 22 above, and the

claim is rejected on that basis.

34.   The limitations of claim 34 are rejected in the analysis of claim 23 above and the claim is rejected on that basis.

35.   The limitations of Claim 35 are rejected in the analysis of claim 24 above and the claim is rejected on that basis.

36.   The limitations of claim 36 are rejected in the analysis of claim 25 above and the claim is rejected on that basis.

37.   The limitations of claim 37 are rejected in the analysis of claim 26 above and the claim is rejected on that basis.

38.   The limitations of claim 38 are rejected in the analysis of claim 27 above and the claim is rejected on that basis.

39.   The limitations of claim 40 are rejected in the analysis of claim 29 above and the claim is rejected on that basis.

40.   The limitations of claim 41 are rejected in the analysis of claim 8 above, and the claim is rejected on that basis.

41.   The limitations Of claim 42 are rejected in the analysis of claim 30 above, and the

claim is rejected on that basis.

42.   With respect to claim 49, Iliff teaches the disease object directly invokes another

disease object (i.e., migraine disease object directly invokes a next disease object in a

ranked list, lines 38-42 in col. 40 and lines17-35 in col. 39).

43.   With respect to claim 50, Iliff teaches the disease object directly invokes the

symptom object (i.e., migraine object directly invokes ,migraine symptom/questions

objects, lines 61-67 in col. 39).

44.   With respect to claim 51, Iliff teaches one of the plurality of disease objects

directly calls another of the plurality of disease object (i.e., .migraine disease object

directly invokes a next disease object in a ranked list, lines 38-42 in col. 40 and lines 17-

35 in col. 39).

45.   As to Claim 54-55, Iliff teaches "wherein the diagnosis identifies at least one

abnormal health state" (col 20, line 1-5, col 36, line 50-63)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

46.   Claims 1, 3-5, 10-13, 15-!9, 43-48, 52-53 and 56 are rejected under 35 U.S.C.

103(a) as being unpatentable over Iliff (U.S. Patent No. 5,868,669) in view of Gray

(U.S. Patent No. 6,149,585).

47.   With respect to claim 1, Iliff teaches " a method of diagnosing a patient,

implemented as a set of instructions executed by a computing device [col 4, line 37-47],

Iliff supports computer having input and output, algorithm processor executing the

instruction in the computer; computing device corresponds to Iliff's computer;

Iliff teaches providing, to the computing device, [col 4, line 37-47], a plurality of

disease objects, processing data indicative of an abnormal health state or disease

and each disease object (col 20, line 1-5, col 36, line 50-63), abnormal health

state or disease corresponds to Iliff's disease object[s]; associated with a plurality of

symptom objects (col 20, line 1-5, col 36, line 50-63) ,

Iliff teaches providing, to the computing device, a plurality of symptom objects,

each symptom object processing data indicative of a patient sign, complaint, finding, or

test result (col 39, line 35-60, i.e., diagnosises and symptoms, each diagnosis

associated with symptoms in MDATA system, lines 24-35 in col. 12, lines 38-45 in

col. 21, and line 24 in Col. 35 thru line 49 in col. 42, the MDATA system is written in

object-oriented program language, such as C++, lines 7-16 in col. 14, therefore teaching

object);

Iliff teaches "associating, via the computing device, a disease object with at least

one symptom object" (col 20, line 1-5, col 36, line 50-63);

Iliff teaches assigning , via the computing device, a weight for each symptom

object (i.e., weighted symptom questions, lines 24-34 in col. 60, lines 45-48 in col. 61,

and lines. 28- 39 in col. 62).' Iliff teaches alternative symptoms objects for a particular

preferred symptom object are selected from a set of archived symptoms objects that are

available for reuse (i.e., symptoms of headache, lines 6-29 in col. 13, fig. 6, lines 36-57

in col. 39, and lines 7-32 in col. 40).

Iliff teaches 'using one of the archived symptom objects in conjunction with a

plurality of disease objects" (archived symptom objects related to symptoms of

headache for example as detailed in line 6-29, in col 13, fig 6, lines 36-52 in col. 39,

further Iliff also specifically supports medical history objects database is part of of

MDATA system, typically history object database contains medical conditions pointer

into the past medical history col 23, line 26-28, line 46-50)

'receiving, via direct interactive dialogue between a user and the computing

device, a patient symptom input" (Iliff: col 5, line 36-45; Gray: fig 19-22A, col 9, line 42-

55), Iliff specifically teaches user interface allows asking "questions", and "receiving

answers" corresponds to interactive dialogue between users and computing device;

further prior art of reference Gray also specifically supports graphical user interface

allows to select required information particularly related to patient physical examination

data user selecting "signs & Symptoms questions and answers;

Iliff teaches associating the patient symptom input with at least one symptom

object (col 25, line 64-67, col 26, line 1-13)

Iliff teaches, selecting via the computing device (fig 1, fig 3-4) at least one

disease object applicable to a patient (lines 53-60 in col. 39); based on at least one of

the preferred symptom object or the alternative symptom object(i.e., the MDATA

system concludes that migraine is the most likely cause of the patient's headache,

(i.e., symptoms of headache, lines 6-29 in col. 13, fig. 6, lines 36-57 in col. 39,

and lines 7-32 in col. 40);

Iliff teaches invoking, via the computing device, (fig 1, fig 3-4), a preferred

symptom object or one of the related alternative symptom objects for the, (fig 1, fig 3-

4), selected disease object so as to determine a diagnosis of a patient based on the

object invocation (i.e., migraine object directly invokes migraine symptom/questions

objects, lines 61-67 in col. 39);

Iliff and Gray teaches "outputting, via the computing device, a diagnosis based at

least one of the invoking or selecting (Iliff: fig 1,3-4col 5, line 36-38; Gray: col 1, line 57-

67col 5, line 61-64), Iliff, and Gray both supports input and out devices particularly

graphical user interface allows users to get return response to display the list;

"wherein each object comprises an encapsulated combination of data and

processes that manipulate the data" (MDATA system supports object oriented language

such as C++ related to patient's medical records and/objects, further Encapsulation is

the process of combining data and functions into a single unit called class is integral

part of II C++ programming because Iliff specifically teaches MDATA system including

defining various software modules as detailed in col 8, line 49-67) .

It is however, noted that Iliff does not explicitly disclose a preferred weight and an

alternative weight. However, Gray discloses a plurality of disease associated with a

plurality of symptoms in a medical diagnostic enhancement system (lines 7-24 in col. 6

and line 23 in col. 2 thru line 41 in col. 3). Gray also discloses assigning a weight for

each symptom, wherein a particular disease includes a preferred weight for one or more

preferred symptoms and an alternative weight for one or more related alternative

symptoms, wherein the alternative symptoms are selected from a set of symptoms

(lines 25-48 in col. 6).

Therefore, it would have been obvious to one of the ordinary skill in the art at the

time of applicant's invention to incorporate diagnostic enhancement tasks particularly

patient data for possible diagnoses of Gray into computerized medical diagnostic

particularly user's changing condition over time of Iliff because both Iliff, Gray

specifically directed to medical diagnostic system [Iliff: Abstract; Gray: Abstract],

particularly in a object oriented environment [Iliff: col 8, line 46-55; Gray: col 3, line 10-

16] and they both are from same field of endeavor; Because both Iliff and Gray teach

medical diagnostic and treatment advice, it would have been obvious to one of the

ordinary skill in the art at the time of applicant's invention to substitute and/or modify

one method for the other to achieve the predictable result of extracting specific

diagnosises and symptom conditions, further able to present an accurate diagnosis to

the patient to treat condition[s] [Gray: Abstract, col 4, line 31-39]

48.   With respect to claim 3, Iliff teaches the set of archived symptom objects is

stored in a database (fig. 1, fig. 3, and fig. 6).

49.   With respect to claim 4, Iliff teaches accessing the set of archived symptom

objects stored in the database via a global computer network (fig. 1).

50.   With respect to claim 5, Iliff teaches each symptom object has underlying objects

used to establish a symptom (i.e., a node map, lines 1-7 in col. 15), wherein the objects

are arranged in a hierarchical relationship (i.e., a directed graph of a node map, line 64

in col. 14 thru line 24 in col. 15).

51.   With respect to claim 10, Iliff discloses the claimed subject matter as discussed

above. Iliff further teaches one or more alternative symptoms of a preferred symptom

(i.e., symptoms of headache, lines 36-57 in col. 39). Iliff does not explicitly disclose a

preferred weight and an alternative weight. However, Gray discloses a plurality of

disease associated with a plurality of symptoms in a medical diagnostic enhancement

system (lines 7-24 in col. 6 and line 23 in col. 2 thru line 41 in col. 3). Gray also

discloses assigning a weight for each symptom, wherein a particular disease includes a

preferred weight for one or more preferred symptoms and an alternative weight for one

or more alternative symptoms (lines 25-48 in col. 6). Therefore, based on Iliff in view of

Gray, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to utilize the teaching of Gray to the system of Iliff in order to

present an accurate diagnosis.

52.   With respect to claim 11, Iliff teaches providing a plurality of disease objects,

processing data indicative of an abnormal health state or disease and each disease

object (col 20, line 1-5, col 36, line 50-63), abnormal health state or disease

corresponds to Iliff's disease object[s]; associated with a plurality of symptom objects ,

each symptom object processing data indicative of a patient sign, complaint, finding, or

test result (col 39, line 35-60, i.e., diagnosises and symptoms, each diagnosis

associated with symptoms in MDATA system, lines 24-35 in col. 12, lines 38-45 in

col. 21, and line 24 in Col. 35 thru line 49 in col. 42, the MDATA system is written in

object-oriented program language, such as C++, lines 7-16 in col. 14, therefore teaching

object);

     Iliff teaches receiving, via direct interactive dialogue between a user and the

computing device, a patient symptom input (Iliff: col 5, line 36-45; Gray: fig 19-22A, col

9, line 42-55), Iliff specifically teaches user interface allows asking "questions", and

"receiving answers" corresponds to interactive dialogue between users and computing

device; further prior art of reference Gray also specifically supports graphical user

interface allows to select required information particularly related to patient physical

examination data user selecting "signs & Symptoms questions and answers;

Iliff teaches associating the patient symptom input with at least one symptom

object (col 25, line 64-67, col 26, line 1-13)

Iliff teaches assigning , via the computing device (col 4, line 37-47, fig 1) a weight

for one or more symptom (i.e., weighted symptom questions, lines 24-34 in col. 60,

lines 45-48 in col. 61, and lines 28-39 in col. 62). Iliff teaches alternative symptoms for a

particular preferred symptom are selected from a set of archived symptoms objects

that are available for reuse (lines 6-29 in col. 13, fig. 6, lines 36-57 in col. 39, and lines

7-32 in col. 40). Iliff teaches a. particular preferred symptom has one or more related

alternative symptoms that represent different approaches for eliciting further diagnostic

information related to a same patient health condition (i.e., symptoms of headache, lines

36-57 in col. 39, lines 36-57 in col. 39, and lines 7-32 in col. 40).

Iliff teaches 'using one of the archived symptom objects in conjunction with a

plurality of disease objects" (archived symptom objects related to symptoms of

headache for example as detailed in line 6-29, in col 13, fig 6,(lines 36-52 in col. 39,

further Iliff also specifically supports medical history objects database is part of of

MDATA system, typically history object database contains medical conditions pointer

into the past medical history col 23, line 26-28, line 46-50)

Iliff teaches selecting, via the computing device, (fig 1, fig 3-4), from the

plurality of disease objects, a disease object applicable to a patient (i.e., the MDATA

system concludes that migraine is the most likely cause of the patient's headache, lines

53-60 in col. 39);

Iliff teaches invoking, via the computing device (fig 1, fig 3-4), a preferred

symptom object or one of the related alternative symptom objects for the selected

disease object so as to output a diagnosis of a patient based on the object invocation

(i:e., migraine object directly invokes migraine symptom/questions objects, lines 61-67

in col. 39).

Iliff, and Gray teaches 'outputting, via the computing device, a diagnosis based at

least one of the invoking or selecting (Iliff: fig 1,3-4col 5, line 36-38; Gray: col 1, line 57-

67col 5, line 61-64), Iliff, and Gray both supports input and out devices particularly

graphical user interface allows users to get return response to display the list;

It is however, noted that Iliff does not explicitly disclose a preferred weight and an

alternative weight. On the other hand, Gray discloses a plurality of disease associated

with a plurality of symptoms in a medical diagnostic enhancement system (lines 7-24 in

col. 6 and line 23 in col. 2 thru line 41 in col. 3). Gray also discloses assigning a weight

for each symptom, wherein a particular disease includes a preferred weight for one or

more preferred symptoms and an alternative weight for one or more alternative

symptoms, wherein the alternative symptoms for a particular preferred symptom are

selected from a set of symptoms (lines 25-48 in col. 6).

Therefore, it would have been obvious to one of the ordinary skill in the art at the

time of applicant's invention to incorporate diagnostic enhancement tasks particularly

patient data for possible diagnoses of Gray into computerized medical diagnostic

particularly user's changing condition over time of Iliff because both Iliff, Gray

specifically directed to medical diagnostic system [Iliff: Abstract; Gray: Abstract],

particularly in a object oriented environment [Iliff: col 8, line 46-55; Gray: col 3, line 10-16] and they both are from same field of endeavor; Because both Iliff and Gray teach medical diagnostic and treatment advice, it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute and/or modify one method for the other to achieve the predictable result of extracting specific diagnosis's and symptom conditions, further able to present an accurate diagnosis to the patient to treat condition[s] [Gray: Abstract, col 4, line 31-39]

53.   With respect to claim 12, Gray further teaches weights can be different (lines 25-48 in col. 6). Therefore, the limitations of claim 12 are rejected in the analysis of claim 11 above, and the claim is rejected on that basis.

54.   With respect to claim 13, Gray further teaches weights can be different (lines 25-48 in col. 6). Therefore, the limitations of claim 13 are rejected in the analysis of claim 12 above, and the claim is rejected on that basis.

55.   With respect to claim 15, Iliff teaches the set of archived symptom objects is stored in a database (fig. 1, fig. 3, and fig. 6).

56.   With respect to claim 16, Iliff teaches accessing the set of archived symptom objects stored in the database via a global computer network (fig. 1).

57.   With respect to claim 17, Iliff teaches each symptom object has underlying

objects used to establish a symptom (i.e., a node map, lines 1-7 in col. 15).

58.   With respect to claim 19, Iliff teaches a particular preferred symptom is selected

when a particular diagnosis is likely (lines 36-52 in col. 39).

59.   The limitations of claim 44 are rejected in the analysis of claim 19 above, and the

claim is rejected on that basis.

60.   With respect to claim 45, Iliff teaches a particular disease is associated with a

plurality of disease objects corresponding to different phases of the particular disease

(i.e., stages of illness, lines 31-42 in col. 1).

61.   With respect to claim 46, Iliff teaches a particular disease is associated with a

plurality of disease objects corresponding to different populations for the particular

disease (lines 22-28 in col. 47).

62.   With respect to claim 47, Iliff teaches a particular disease object is representative

of a plurality of related diseases that share common symptoms (i.e., meningitis and

brain tumor shares headache, lines 11-26 in col. 41).

63.   With respect to claim 48, Iliff teaches the. selected disease object directly

invokes another of the plurality of disease objects (i.e., migraine disease object directly

invokes a next disease object in a ranked list, lines 38-42 in col. 40 and lines 17-35 in

col. 39).

64.   With respect to claim 52, Iliff teaches the selected disease object directly invokes

another of the plurality of disease objects (i.e., migraine disease object directly invokes

a next disease object in a ranked list, lines 38-42 in c01.40 and lines 17-35 in col. 39).

65.   As to Claim 53,56, Iliff teaches "wherein the diagnosis identifies at least one

abnormal health state" (col 20, line 1-5, col 36, line 50-63)

66.   Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Iliff (U.S. Patent No. 5,868,669) in view of Gray (U.S. Patent No. 6,149,585),

and further in view of Branson et al. (U.S. Patent No. 6,598,035).

67.   With respect to claim 2, Iliff and Gray disclose the claimed subject matter as

discussed above except assigning a new name for a symptom object that is reused.

However, Branson teaches assigning a new name for a symptom object that is reused

(fig. 16 and lines 17-39 in col. 20) in order to provide customization and extension of an

object (lines 21-57 in col. 4). Therefore, based on Iliff in view of Gray, and further in view

of Branson, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to utilize the teaching of Branson to the system of Iliff in order to

provide customization and extension of an object.

68.   The limitations of claim 14 are rejected in the analysis of claim 2 above, and the

claim is rejected on that basis.

Response to Argument

69.   Applicant's arguments [page 12-23] filed 7/25/2011 with respect to

claims 1-17,19-27,29-38,40-42,44-56 have been fully considered but they are not

persuasive, for examiners' response, see discussion below:

NOTE: Examiner also cites and incorporates "**Board of Patent Appeals and**

Interferences" decision mailed on 3/23/2010

Rejection under - 35 USC § 101

a)   At page 13-14, claims 1,6,9, and 11, Examiner noted applicant amended claims

1,6,,9,11 directed to statutory subject matter, the following is examiners' response:

NOTE:

   claim 1 and 11, preamble amended to include "implemented as a set of

instructions executed by a computing device [3/22/2011];

   Claim 6, and 9, preamble amended to include "a computing device; and

computer code, configured to execute on the computing device, the computer

code comprising" [7/25/2011]

   At page 13-14, applicant argues original specification supports computerized

medical diagnostic system (spec p.1,l.24). Method employed in a "computerized

medical diagnostic systems" necessitate a computing device to execute a program

that...takes a set of diseases...and processes them against one specific patient."

   As to the above argument [a]: Although applicant amended claims 1 ,6,9,11 as

stated above to include "a set of instructions executed by a <u>computing device</u>",

….however, merely adding language such as "set of instructions executed by a

computing device"……. selecting via the computing device…… outputting, via the

computing device…… wherein each object has corresponding data and processes

"encapsulated" …invoked to access the data" [claim 6, claim 9 as amended

7/25/2011] …..manipulate the data" do not have support from the originally filed

specification [page 2 through 85 including drawing fig 1-35], particularly " a set of

instructions executed by a computing device [as amended 3/22/2011], " a computing

device; and computer code, configured to execute on the computing device…." [claim 6,

claim 9 as amended 7/25/2011] are considered to be mere software routines and/or

software code in view of the specification [page 3, 4-7, line 12-16, page 10, 21-30,

page 14,-20, page 31-34, page 85 line 12-26, page 87], specifically examiner notes as

follows:

1)   *spec page 13-14 directed to "disease object" – defines as software object*

2)   *spec page 15-16 directed to "symptom object" – defines as software object*

3)   *spec page 18-19 directed to "valuator object" – defines as software object*

4)   *spec page 19-20 directed to "question object" – defines as software object*

5)   *spec page 20-21 directed to "node object"- defines as software object*

6)   *spec page 29-30 directed to "alternative symptom" –defines as software object*

also, **Encapsulation** is the process of <u>combining data and functions</u> into a single unit

<u>called class</u> , and is only accessible through the <u>functions</u> present inside the <u>class</u>, data

<u>encapsulation</u> is part of hiding data, and therefore, claims 1,11 as amended considered

as software per sa, as stated above

Therefore, claims 1, 11 as amended [3/22/2011], claims 6,9 [as amended

7/25/2011] ***<u>"do not have support for computing device; and computer code,</u>***

<u>configured to execute on the computing device"</u> considered as software per sa.

They are, at best, functional descriptive material per se. Claims 1-56 are likewise

rejected. As stated above.

Examiner hereby incorporating previous office action arguments [mailed

12/7/2010, 5/23/2011]

Examiner notes, as stated in the Final Rejection dated 8/13/2007, and Board

decision mailed on 3/23/2010 [page 8-10] The examiner finds that the claims 6, 9 in the

instant application [software routines or merely algorithms] share the same

characteristics as the claims in <u>Gottshcalk</u>. The claims 6, 9 in the instant application are

directed to a "automated computer-implemented diagnostic system"[claim 6];

"automated diagnostic system" [claim 9] is equivalent to machine-implemented abstract

idea. These claims 6 and 9 are (i) so abstract and sweeping as to cover both known

and unknown uses of the underlying "software algorithm" (ii) so abstract and sweeping

as to be applicable to a wide variety of unrelated applications.

Further, examiner also noted that merely amending claims 6 and 9 added

"computing device.... computer code..." , particularly computing device ***do not have***

support from the instant application specification as detailed above.

b)   At page 14-18, claim 6 and 9, applicant argues present application claims "

patent office acknowledges that the '669 patent does not disclosure encapsulation of

data, instead Branson cited by the patent office discloses "objects that encapsulate

data......" [page 16 and page 17]

patent office has not shown how Branson anticipates mechanism wherein "other objects

only see [particular] processes[.] [page 16 and page 17-18]

As to the argument [b], examiner hereby refer to examiner answer arguments

mailed date 8/28/2008 and Board decision page 11-17 mailed on 3/23/2010, also follow

the discussion;, further noted that applicant merely presenting claim language without

specifying how the instant amendments address the issues raised by Examiner.

Accordingly, Examiner repeats the arguments previously presented.

As amended claims 6,9, Iliff supports computer having input and output,

algorithm processor executing the instruction in the computer; computing device

corresponds to Iliff's computer , further Iliff strongly supports both input and output

device col 4, line [62-67, col 5, line 36-45],

As noted from the prior art of the reference, Iliff specifically teaches **_MDATA_**

system supports object oriented language such as C++ related to patient's medical

records and/objects, further combining data and functions into a single unit called class

is integral part of C++ programming because Iliff specifically teaches MDATA system

including defining various software modules as detailed in col 8, line 49-67 reads on the

claim 6 [as amended] limitation" plurality of diagnostic objects which interact, as

executed by the computing device, to receive input from a user and, as a result of said

interaction [Iliff: col 4, line 62-67] determine a diagnosis of a patient ..."

Iliff also strongly teaches crating various catalog objects related to medical

algorithm in the patient list for all patients particularly identifying different set of

"problems" or "complaint" for example "headache" that requires immediate attention,

including "very serious" that requires medical attention (col 20, line 1-5, col 36, line 50-

63) reads on "<u>a disease object processing data indicative of an abnormal health state</u>

<u>or disease</u>". It is further noted that Iliff specifically teaches (MDATA system processing

information related to patient's diagnostic or symptom screening for example as detailed

in col 39, line 35-60 reads on "<u>a symptom object</u>, processing data indicative of a patient

sign, complaint, finding or test results; further, Iliff teaches <u>MDATA</u> system specifically

processing specific questions related to specific headaches for example "<u>migraine</u>

<u>screening</u>" (col 30, line 35-60, col 40, line 7-12) reads on "processing data indicative of

<u>questions to ask the patient</u> specific to a specific symptom of the patient".

Iliff discloses the claimed subject matter as discussed above except

encapsulation of data, although it is noted that ***encapsulation*** is the process of

combining data and functions into a single unit called class is integral part of C++

programming because Iliff specifically teaches MDATA system including defining

various software modules as detailed in col 8, line 49-67.

On the other hand, Braun et al. teaches "wherein each object has corresponding

data and processes, and wherein the data is encapsulated so that other objects only

see the processes of a particular object that can be invoked to access the data"

(Abstract, col 3, line 15-19, col 4, line 32-45, col 11, line 14-31), Braun directed to

medical diagnosis system specifically real-time data collection, automated data

analysis, data encoding, viewing and like i.e. supporting multiple functionalities, further

allows data collection, encapsulation as detailed in col 11, line 14-31.

Therefore, based on Lliff in view of Braun, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to utilize the teaching

of medical diagnosis data collection, analysis into the system of Iliff's medical diagnostic

and treatment system in order to maintain the integrity of the overall data collection,

encoding, and analysis (Braun: Abstract), further allows supporting "distributed

collection including remote monitoring application (col 12, line 35-38), furthermore

allows users of Iliff to added programmed functionality which initiates new data

collection or output, monitors data streams as new data arrives, produces new views of

the data and like (Braun: col 11, line 53-57)

Examiner applies above arguments to claim 9 and their depend claims.

Therefore, Applicant's remarks are deemed not to be persuasive, and claims 6-9,

20-27, 29-38, 40-42, and 49-51, and 54-55 stand rejected under 35 USC 103(a)

unpatentable over Iliff in view of Braun et al.

c)   At page 18-22, claims 1, claim 11, applicant argues the following:

"for all of the reasons set forth in Applicant's response to the previous office

action, the patent office has not shown how the '669 patent or Gray, either alone or in

combination, teach or suggest claim 1 and claim 11. Furthermore, applicant has

amended claim 1 to include the additional limitation of "using one of the archived

symptom objects in conjunction with a plurality of disease objects....."

Furthermore, the patent office has not shown how the '669 patent discloses

"using....archived symptom objects in conjunction with a plurality of disease

objects.......

On that basis, the Patent office has not established a prima facie case for

obviousness as to claim 1 and claim 11

As to the above argument [c],

Under 35 USC § 103, by showing insufficient evidence of prima facie obviousness or by

rebutting the primafacie case with evidence of secondary indicia of nonobviousness.")

(quoting In re Rouffet, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

> "Section 103 forbids issuance of a patent when 'the differences between
> the subject matter sought to be patented and the prior art are such that the
> subject matter as a whole would have been obvious at the time the invention was
> made to a person having ordinary skill in the art to which said subject matter
> pertains.'" KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1734 (2007).

The question of obviousness is resolved on the basis of underlying factual

determinations including (1) the scope and content of the prior art, (2) any differences

between the claimed subject matter and the prior art, (3) the level of skill in the art, and

(4) where in evidence, so-called secondary considerations. Graham v. John Deere Co.,

383 U.S. 1, 17-18 (1966). See also KSR, 127 S. Ct. 1727, 1734 ("While the sequence of

these questions might be reordered in any particular case, the [Graham] factors

continue to define the inquiry that controls.")

"The combination of familiar elements according to known methods is likely to be

obvious when it does no more than yield predictable results."). Leapfrog Enter., Inc. v.

Fisher-Price, Inc., 485 F.3d 1157, 1161 (Fed. Cir. 2007) (quoting KSR Int'l v. Teleflex,

Inc., 127 S. Ct. 1727, 1739(2007)). "One of the ways in which a patent's subject matter

can be proved obvious is by noting that there existed at the time of invention a known

problem for which there was an obvious solution encompassed by the patent's claims."

KSR, 127 S. Ct. at 1742.

Discussing the obviousness of claimed combinations of elements of prior art,

KSR explains:

> When a work is available in one field of endeavor, design incentives and
> other market forces can prompt variations of it, either in the same field or a
> different one. If a person of ordinary skill can implement a predictable variation, §
> 103 likely bars its patentability. For the same reason, if a technique has been
> used to improve one device, and a person of ordinary skill in the art would
> recognize that it would improve similar devices in the same way, using the
> technique is obvious unless its actual application is beyond his or her skill.
> Sakraida [v. AG Pro, Inc., 425 U.S. 273 (1976)] and Anderson's-Black Rock[, Inc.
> v. Pavement Salvage Co., 396 U.S. 57 (1969)] are illustrative--a court must ask
> whether the improvement is more than the predictable use of prior art elements
> according to their established functions.

KSR, 127 S. Ct. at 1740. Where the claimed subject matter cannot be fairly

characterized as involving the simple substitution of one known element for another or

the mere application of a known technique to a piece of prior art ready for the

improvement, a holding of obviousness can be based on a showing that there was "an

apparent reason to combine the known elements in the fashion claimed." KSR, 127 S.

Ct. at 1741. Such a showing requires "some articulated reasoning with some rational

underpinning to support the legal conclusion of obviousness." Id., 127 S. Ct. at 1741

(quoting In re Kahn, 441 F.3d 977, 987(Fed. Cir. 2006)).

The reasoning given as support for the conclusion of obviousness can be based

on interrelated teachings of multiple patents, the effects of demands known to the

design community or present in the marketplace, and the background knowledge

possessed by a person having ordinary skill in the art. KSR, 127 S. Ct. at 1740-41. See

also Dystar Textilfarben GmbHv. C.H. Patrick Co., 464 F.3d 1356, 1368 (Fed. Cir.

2007).

Examiner noted that court has recently reaffirmed that:

> [A]n implicit motivation to combine exists not only when a suggestion may
> be gleaned from the prior art as a whole, but when the 'improvement' is
> technology-independent and the combination of references results in a product or
> process that is more desirable, for example because it is stronger, cheaper,
> cleaner, faster, lighter, smaller, more durable, or more efficient. Because the
> desire to enhance commercial opportunities by improving a product or process is
> universal-and even common-sensical-we have held that there exists in these
> situations a motivation to combine prior art references even absent any hint of
> suggestion in the references themselves. In such situations, the proper question
> is whether the ordinary artisan possesses knowledge and skills rendering him
> capable of combining the prior art references.

Leapfrog, 485 F.3d at 1162 (holding it "obvious to combine the Bevan device with

the SSR to update it using modem electronic components in order to gain the commonly

understood benefits of such adaptation, such as decreased size, increased reliability,

simplified operation, and reduced cost").

Also, a reference may suggest a solution to a problem it was not designed to

solve and thus does not discuss. KSR, 127 S. Ct. at 1742 ("Common sense teaches..,

that familiar items may have obvious uses beyond their primary purposes, and in many

cases a person of ordinary skill will be able to fit the teachings of multiple patents

together like pieces of a puzzle ....A person of ordinary skill is also a person of

ordinary creativity, not an automaton.").

The prior art relied on to prove obviousness must be analogous art. As explained

in Kahn,

> the 'analogous-art' test-has long been part of the primary Graham analysis
> articulated by the Supreme Court. See Dann [v. Johnston,] 425 U.S. [219,] 227-
> 29 (1976), Graham, 383 U.S. at 35. The analogous-art test requires that the
> Board show that a reference is either in the field of the applicant's endeavor or is
> reasonably pertinent to the problem with which the inventor was concerned in
> order to rely on that reference as a basis for rejection. In re Oetiker, 977 F.2d
> 1443, 1447 (Fed. Cir. 1992). References are selected as being reasonably
> pertinent to the problem based on the judgment of a person having ordinary skill
> in the art. Id. ("[I]t is necessary to consider 'the reality of the circumstances,'-in
> other words, common sense-in deciding in which fields a person of ordinary skill
> would reasonably be expected to look for a solution to the problem facing the
> inventor." (quoting In re Wood, 599 F.2d 1032, 1036 (C.C.P.A. 1979))).
> Kahn, 441 F.3d at 986-87. See also In re Clay, 966 F.2d 656, 659 (Fed. Cir.
> 1992) ("[a] reference is reasonably pertinent if, even though it may be in a
> different field from that of the inventor's endeavor, it is one which, because of the
> matter with which it deals, logically would have commended itself to an inventor's
> attention in considering his problem.").

In view of KSR's holding that "any need or problem known in the field of

endeavor at the time of invention and addressed by the patent can provide a reason for

combining the elements in the manner claimed," 127 S. Ct. at 1742 (emphasis added), it

is clear that the second part of the analogous-art test as stated in Clay, supra, must be

expanded to require a determination of whether the reference, even though it may be in

a different field from that of the inventor's endeavor, is one which, because of the matter

with which it deals, logically would have commended itself to an artisan's (not

necessarily the inventor's) attention in considering any need or problem known in the

field of endeavor. Furthermore, although under KSR it is not always necessary to

identify a known need or problem as a motivation for modifying or combining the prior

art, it is nevertheless always necessary that the prior art relied on to prove obviousness

be analogous. See KSR, 127 S. Ct. at 1739. ("The Court [in United States v. Adams,

383 U.S. 39, 40 (1966)] recognized that when a patent claims a structure already known

in the prior art that is altered by the mere substitution of one element for another known

in the field, the combination must do more than yield a predictable result.") (emphasis

added). See also Sakraida, 425 U.S. 273,280 (1976)

In this case, prior art of reference Iliff is directed to computerized medical

diagnostic system", particularly, "MDATA" system defining various objects related to

"medical diagnostic and treatment", further MDATA system specifically supports user

interaction specifically between doctor and patient [Abstract, col 4, line 5-11], further Iliff

also specifically teaches "MDATA" software written in Microsoft C/C++ version ie. using

"structured programming techniques" supported by algorithm process [col 8, line 46-50].

It is also noted that Iliff strongly supports and developed based on "international

classification of Diseases codes" [col 13, line 6-8], further MDAtA system's algorithms

execution based on "medical history", "patient's responses", particularly supports user

interaction question and answer types with multiple-choice questions [col 14, line 57-67]

as stated above, Iliff specifically directed to diagnosises and symptoms, each diagnosis

associated with symptoms in MDATA system, lines 24-35 in col. 12, lines 38-45 in col.

21, and line 24 in Col. 35 thru line 49 in col. 42, the MDATA system is written in object-

oriented program language, such as C++, lines 7-16 in col. 14, therefore teaching

object. Iliff also teaches MDATA system supports object oriented language such as

C++ related to patient's medical records and/objects, further combining data and

functions into a single unit called class is integral part of II C++ programming because

Iliff specifically teaches MDATA system including defining various software modules as

detailed in col 8, line 49-67) .

Furthermore, it is noted that Iliff teaches archived symptom objects related to

symptoms of headache for example as detailed in line 6-29, in col 13, fig 6, lines 36-52

in col. 39, further Iliff also specifically supports medical history objects database is part

of of MDATA system, typically history object database contains medical conditions

pointer into the past medical history col 23, line 26-28, line 46-50 reads on the limitation

"using one of the archived symptom objects in conjunction with a plurality of disease

objects".

In this case prior art of reference Gray is directed to "medical diagnostic system",

more specifically, processing, recommending diagnostic tasks based on possible

diagnostic task [Abstract], Gray also strongly teaches "executing diagnostic

enhancement program for example as detailed in fig 2, element 142. It is also noted

that Gray supports user interface particularly presenting "medical problem" such as

patient data including "symptoms", outputting possible diagnoses recommendations for

example as detailed in col 3, line 43-65, col 9, line 42-55]

It is however, noted that Iliff does not explicitly disclose a preferred weight and an

alternative weight. On the other hand, Gray discloses a plurality of disease associated

with a plurality of symptoms in a medical diagnostic enhancement system (lines 7-24 in

col. 6 and line 23 in col. 2 thru line 41 in col. 3). Gray also discloses assigning a weight

for each symptom, wherein a particular disease includes a preferred weight for one or

more preferred symptoms and an alternative weight for one or more alternative

symptoms, wherein the alternative symptoms for a particular preferred symptom are

selected from a set of symptoms (lines 25-48 in col. 6).

Therefore, it would have been obvious to one of the ordinary skill in the art at the

time of applicant's invention to incorporate diagnostic enhancement tasks particularly

patient data for possible diagnoses of Gray into computerized medical diagnostic

particularly user's changing condition over time of Iliff because both Iliff, Gray

specifically directed to medical diagnostic system [Iliff: Abstract; Gray: Abstract],

particularly in a object oriented environment [Iliff: col 8, line 46-55; Gray: col 3, line 10-

16] and they both are from same field of endeavor; Because both Iliff and Gray teach

medical diagnostic and treatment advice, it would have been obvious to one of the

ordinary skill in the art at the time of applicant's invention to substitute and/or modify

one method for the other to achieve the predictable result of extracting specific

diagnosis's and symptom conditions, further able to present an accurate diagnosis to

the patient to treat condition[s] [Gray: Abstract, col 4, line 31-39]

Therefore, Applicant's remarks are deemed not to be persuasive, and

claims 1, 3-5, 10-13, 15-!9, 43-48, 52-53 and 56 stand rejected under 35 USC 103(a) as

being unpatentable over Iliff in view of Gray

Conclusion

The prior art made of record

a.   US Patent. No.   5868669

b.   US Patent.No.   6149585

c.   US Patent.No.   6050940

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Srirama Channavajjala whose telephone number is

571-272-4108.   The examiner can normally be reached on Monday-Friday from

8:00 AM to 5:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kim, Charles, can be reached on (571) 272-7421. The fax phone numbers

for the organization where the application or proceeding is assigned is 571-273-8300

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Should you have questions on access to the Private PAIR system, contact the

Electronic Business Center (EBC) at 866-217-9197 (toll-free)

/Srirama Channavajjala/
Primary Examiner, Art Unit 2157.